

EPITOPE PEPTIDES IMMUNOGENIC AGAINST *STREPTOCOCCUS PNEUMONIAE*

ABSTRACT

The invention provides a nucleic acid encoding the 37-kDa pneumococcal surface adhesion A protein (PsaA) from *Streptococcus pneumoniae*. Also provided are isolated nucleic acids comprising a unique fragment of at least 10 nucleotides of the 37-kDa protein. The invention also provides purified polypeptides encoded by the nucleic acid encoding the 37-kDa protein from and the nucleic acids comprising a unique fragment of at least 10 nucleotides of the 37-kDa protein. The invention further provides monoclonal antibodies which selectively bind PsaA. In addition peptides are provide that immunospecifically bind to the monoclonal antibodies of the invention, and that are immunogenic against *Streptococcus pneumoniae* infection. Also provided are vaccines comprising such immunogenic polypeptides, and methods of conferring protective immunity against *Streptococcus pneumoniae* infection y administering therapeutic compositions comprising the immunogenic peptides of the invention. Also provided are methods of detecting the presence of *Streptococcus pneumoniae* in a sample using antibodies or antigens, and methods of preventing and treating *Streptococcus pneumoniae* infection in a subject. In addition a method of identifying the sequence of a peptide potentially capable of eliciting protective immunity against a pathogenic microorganism is provided.